

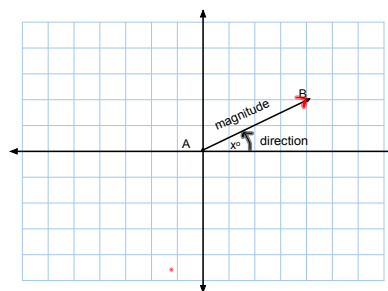
9-1 Translate Figures and Use Vectors

Vector--quantity that has both magnitude, or length, and direction

 \overrightarrow{AB}

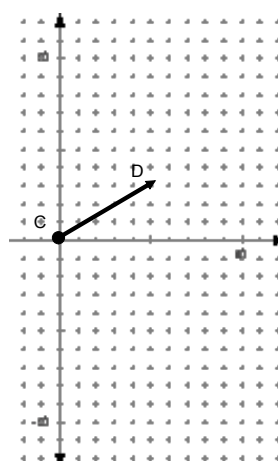
A initial point
B terminal point

We can use vectors to describe translations.



C(0, 0) D(5, 3)

Standard position--initial point at origin

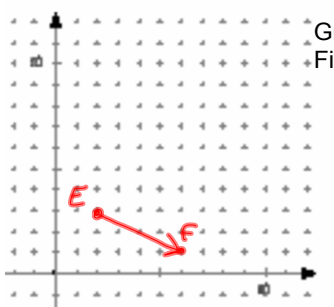


Component form

 $\langle 5, 3 \rangle$
 $\langle x_2 - x_1, y_2 - y_1 \rangle$

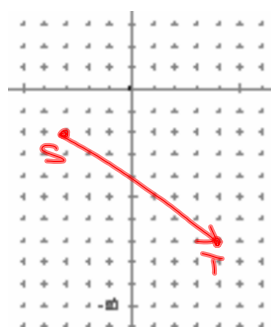
E(2, 3) F(6, 1)

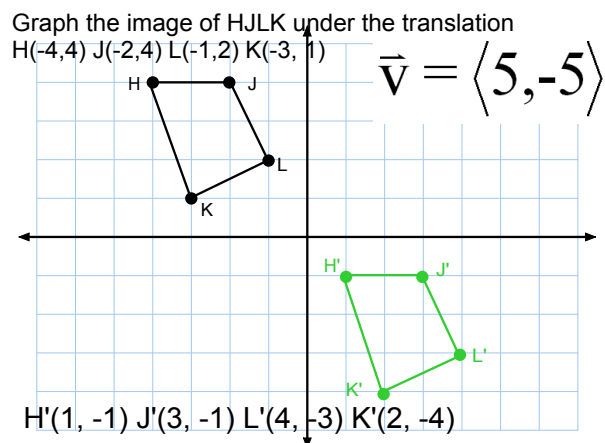
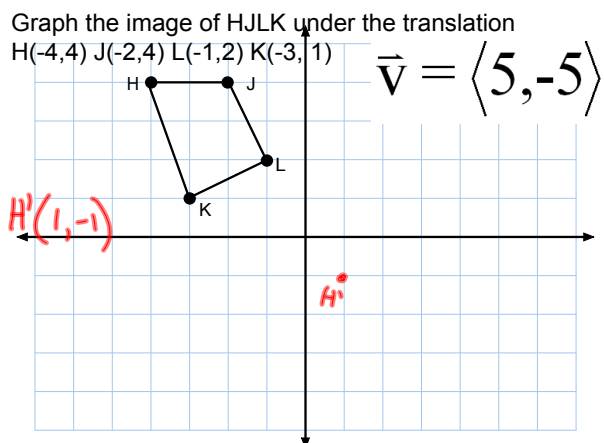
Graph \overrightarrow{EF}
Find the component form.

 $\langle 4, -2 \rangle$


S(-3, -2) T(4, -7)

Graph \overrightarrow{ST}
Find the component form.

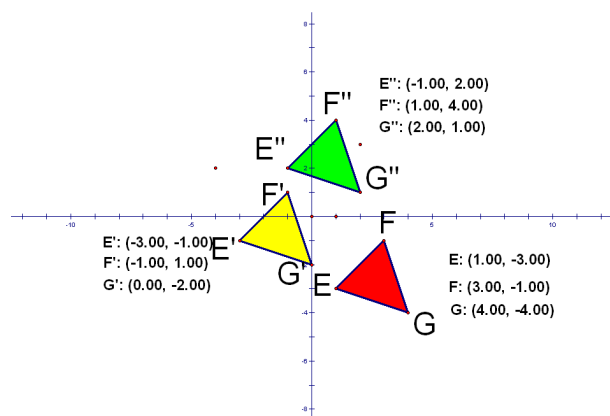
 $\langle 7, -5 \rangle$




Translate Triangle EFG under

$E(1, -3)$
 $F(3, -1)$
 $G(4, -4)$

$\vec{a} = \langle -4, 2 \rangle$
 and then
 $\vec{b} = \langle 2, 3 \rangle$



HW p 576-577 #s 3-6, 15-19